## Claims

What is claimed is:

1. An apparatus for controllably positioning a work implement of an earth moving machine, the work implement including a boom, with attachable rack and dump stops each having a physical boundary, and an attachment being attached thereto, where the boom is actuated by a hydraulic lift cylinder and the attachment is actuated by a hydraulic tilt cylinder, comprising:

implement position sensors that sense the elevational position of the boom and the pivotal position of the attachment and responsively produce respective implement position signals;

a controller that receives the implement position signals, compares the relative position of the boom and the attachment with a pre-determined boundary condition, and produces an electrical valve signal; and

a valve assembly that receives said electrical valve signal and controllably provides hydraulic fluid flow to at least one hydraulic cylinder in response to a magnitude of said electrical valve signal.

2. The apparatus according to claim 1, including at least one look-up table including a plurality of implement position values corresponding to a plurality of scaling values.

3. A method for controllably positioning a work implement of an earth moving machine, the work implement including a boom and an attachment being attached thereto, the work implement including a hydraulic lift cylinder for lifting and lowering the boom and a hydraulic tilt cylinder for dumping and racking the attachment, comprising the steps of:

sensing the positions of the lift and tilt cylinders and producing respective implement position signals;

receiving the implement position signals and producing an electrical valve signal based on a relative position of the boom and the attachment;

comparing the relative positions of the boom and the attachment with a pre-determined boundary position; and

receiving the electrical valve signal and controllably providing hydraulic fluid flow to at least one hydraulic cylinder in response to the relative positions of the boom and attachment in comparison with the pre-determined boundary position.

4. The method of claim 12, including the steps of storing a look-up table that stores a plurality of scaling values that correspond to the position of the lift and the tilt cylinders.